

Claims

1. A modular air gap device adapted for selective insertion into an associated faucet body, said modular air gap device comprising:

a base;

an inlet nipple defining an inlet passage and an outlet nipple defining an outlet passage, said inlet and outlet nipples projecting outwardly from said base in a first direction;

an air gap structure connected to said base and projecting outwardly therefrom in a second direction opposite said inlet and outlet nipples, said base and said air gap structure adapted for receipt within an air gap chamber of a faucet body, said air gap structure defining a flow path having a first end in direct fluid communication with said inlet passage of said inlet nipple and a second end spaced from said outlet passage of said outlet nipple so that an air gap is defined between said second end of said flow path and said outlet passage.

2. The modular air gap device as set forth in claim 2, further comprising a wall that projects outwardly from said base and that defines a liquid collection pool located to collect liquid that flows from said second end of said flow path of said air gap structure, and wherein said outlet passage of said outlet nipple comprises an inlet port in fluid communication with said pool.

3. The modular air gap device as set forth in claim 2, wherein said wall at least partially encircles said air gap structure so that said pool at least partially surrounds said air gap structure.

4. The modular air gap device as set forth in claim 1, wherein said flow path of said air gap structure is defined by a chamber having a chamber inlet and a chamber outlet elevated relative to said chamber inlet so that liquid flows into said chamber from said inlet passage and flows out of said chamber by gravity through said chamber outlet when a level of liquid in said chamber reaches said chamber outlet.

5. The modular air gap device as set forth in claim 1, wherein said air gap structure further comprises a J-shaped conduit that defines said flow path , said J-shaped conduit having a first end connected to said inlet passage of said inlet nipple and a second end elevated relative to said first end and spaced from said outlet passage.

6. The modular air gap device as set forth in claim 5, wherein said air gap structure comprises a support member having an upper end that supports said J-shaped conduit.

7. The modular air gap device as set forth in claim 6, wherein said air gap structure is defined by a one-piece molded plastic body, and wherein said J-shaped conduit is defined by a metal tubular construction, said support member defining a recess that receives said J-shaped conduit.

8. The modular air gap device as set forth in claim 1, further comprising:
a radial flange projecting outwardly from said base, said radial flange adapted to abut a body of the associated faucet into which the air gap structure is inserted.

9. The modular air gap device as set forth in claim 1, wherein a through bore is defined through said base, said through bore adapted to receive a mounting tube of the associated faucet.

10. The modular air gap device as set forth in claim 9, further comprising:
a first wall that projects outwardly from said base and that defines a liquid collection pool located to collect liquid that flows from said second end of said flow path of said air gap structure, wherein said outlet passage of said outlet nipple comprises an inlet port in fluid communication with said pool,
wherein said through bore is surrounded by said pool and a second wall projects outwardly from said base and surrounds said through bore to block flow of liquid from said pool into said through bore.

11. A modular air gap device comprising:
(i) a base adapted for receipt within an associated faucet body, said base comprising a first side and an opposite second side; (ii) a waste water inlet nipple projecting outwardly from said second side of said base and defining a waste water inlet passage projecting; (iii) a waste water outlet nipple projecting outwardly from said second side of said base and defining a waste water outlet passage; and, (iv) a pool defined by a wall extending upwardly from said first side of said base, wherein said waste water outlet passage is in fluid communication with said pool;
a conduit comprising a first end in fluid communication with said waste water inlet passage and a second end spaced from and aligned vertically with said pool so that an air gap is defined between said second end of said conduit and said pool so that liquid that flows from said second end of said conduit is received in said pool and flows therefrom via said waste water outlet passage.

12. The modular air gap device as set forth in claim 11, further comprising a support member projecting outwardly from said first side of said base, wherein said conduit abuts and is supported by said support member.

13. A faucet comprising:

a body defining: (i) an inlet; (ii) an outlet; (iii) a valve chamber located fluidically between said inlet and said outlet; (iv) an air gap chamber that opens in a first end of said body; and, (v) a vent defined through a wall of said body into said air gap chamber;

a valve located in said valve chamber to control flow of liquid from said inlet to said outlet;

a modular air gap device comprising: (i) a base; (ii) an inlet nipple defining an inlet passage and an outlet nipple defining an outlet passage, said inlet and outlet nipples projecting outwardly from said base in a first direction; and (iii) an air gap structure connected to said base and projecting outwardly therefrom in a second direction opposite the first direction, wherein said base and said air gap structure are located within said air gap chamber of said body, said air gap structure defining a flow path having a first end in fluid communication with said inlet passage of said inlet nipple and a second end spaced vertically from said outlet passage of said outlet nipple so that an air gap is defined between said second end of said flow path and said outlet passage, and wherein said inlet and outlet nipples extend outwardly relative to said first end of said body while said air gap structure is located within said air gap chamber of said body.

14. The faucet as set forth in claim 13, wherein said air gap chamber is partially defined by a counter-bore defined in said first end of said body, and wherein said base of said modular air gap device comprises a flange that is received within said counter-bore so that said flange is flush with or recessed into said first end of said body.

15. A faucet comprising:

a body defining an inlet, an outlet, a valve chamber, and air gap chamber defined between said inlet and a first end of said body;

a valve assembly installed in said valve chamber for controlling flow of liquid from said inlet to said outlet;

an air gap device removably installed within said air gap chamber of said body, said air gap device comprising an inlet nipple and an outlet nipple, wherein both said inlet and outlet nipples extend outwardly from a first end of said body and wherein all portions of said air gap device that are located between said first end of said body and said inlet are housed completely within said air gap chamber of said body, said air gap device selectively removable from said air gap chamber of said body without altering an external appearance of said body.